

LineUp With Math™ Alignment
Minnesota Academic Standards
Mathematics

Strand I. MATHEMATICAL REASONING

Standard: Apply skills of mathematical representation, communication and reasoning throughout the remaining four content strands.

Benchmarks	LineUp With Math™ Activities
1. Assess the reasonableness of a solution by comparing the solution to appropriate graphical or numerical estimates or by recognizing the feasibility of a solution in a given context.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
2. Appropriately use examples and counterexamples to make and test conjectures, justify solutions and explain results.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
3. Translate a problem described verbally or by tables, diagrams or graphs, into suitable mathematical language, solve the problem mathematically and interpret the result in the original context.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
4. Support mathematical results by explaining why the steps in a solution are valid and why a particular solution method is appropriate.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Strand II. NUMBER SENSE, COMPUTATION AND OPERATIONS

Sub-Strand B. Computation and Operation

Standard: Compute fluently and make reasonable estimates with positive and negative rational numbers in real-world and mathematical problems. Understand the meanings of arithmetic operations and factorization, and how they relate to one another. Appropriately use calculators and other technologies to solve problems.

Benchmarks	LineUp With Math™ Activities
8. Find, represent and use percentages in real-world and mathematical problems, including percentages greater than 100% and less than 1%.	--Use percent relationships to resolve distance, rate, time conflicts in air traffic control.

Strand V. SPATIAL SENSE, GEOMETRY AND MEASUREMENT

Sub-Strand C. Measurement

Standard: Make calculations of time, length, area and volume within standard measuring systems, using good judgment in choice of units.

Benchmarks	LineUp With Math™ Activities
2. Express measures of time and distance as fractions, mixed numbers and decimals to solve real-world and mathematical problems.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

	--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.
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